

REMARKS/ARGUMENTS

In the Office Action mailed November 1, 2004, claims 1-27 were rejected and claims 26 and 27 were objected to. This rejection is respectfully traversed. Claims 1, 15, 19 and 23 have been amended. Claims 2, 4, 20 and 27 have been cancelled. No new matter has been added. Thus, claims 1, 3, 5-19, 21-26 are pending. Applicant has thoroughly reviewed the outstanding Office Action including the Examiner's remarks and the references cited therein. The following remarks are believed to be fully responsive to the Office Action. All the pending claims at issue are believed to be patentable over the cited references.

SPECIFICATION

Applicant has made amendments to the specification in line with the Examiner's comments. Applicant respectfully requests that the objection to the specification be withdrawn.

DRAWINGS

The drawings have been amended in line with the Examiner's comments. Applicant respectfully requests that the objection to the drawings be withdrawn.

CLAIM OBJECTIONS

The Examiner objected to claims 26 and 27 because of the following informalities: in the first line of these claims, "method" should be changed to "tool device." Applicant has amended claim 26 in line with the Examiner's comments and has cancelled claim 27. Applicant respectfully requests that the objection to these claims be withdrawn and the amendment be entered.

CLAIM REJECTIONS – 35 U.S.C. §102

The Examiner rejected claims 1-3, 19, and 22-27 under 35 U.S.C. §102(b) and/or 35 U.S.C. §102(a) as being anticipated by the applicant's admitted prior art (paragraphs [0002] – [0007] of specification). This rejection is respectfully traversed. In light of the following remarks, Applicant respectfully submits that these claims are allowable.

Without conceding the propriety of the rejections, claims 1, 19 and 23 have been amended. Support for these amendments are to be found throughout the specification, in cancelled claims 2, 4, 20 and 27 and in the Figures.

Applicant's admitted prior art discloses tool blocks involving a steel part coupled to a copper part. It is respectfully submitted that Applicant's admitted prior art does not teach or suggest, *inter alia*, "a method of manufacturing a chill block, comprising: forming a first surface of a chill block from a first material; and bonding a second material to the first surface, wherein the first material is steel and the first surface has a thickness of the first material of less than about 0.5 inches," as recited in claim 1. Nor does the admitted prior art teach or suggest, *inter alia*, "a chill block, comprising: a chill block base having a top surface and a bottom surface and comprising a first material; and a first layer of a second material bonded to the top surface of the chill block base, wherein the second material has a thickness of less than about 0.5 inches," as recited in claim 19 or "a tool device for use with a die casting process for shaping and solidifying molten metal into a shaped object, comprising: shaping means for forming the shape of an object; and a first chilling means for solidifying metal that exits the shaping means, wherein the first chilling means comprises a layer of a first material and a layer of a second material that are bonded together, wherein the first material comprises steel, and the second material comprises copper," as recited in claim 23.

For anticipation under 35 U.S.C. §102 the reference must teach every aspect of the claimed invention either explicitly or implicitly. Any feature not directly taught must be inherently present (M.P.E.P. 706.02). Since each and every element, as set forth in the claim, is not found either expressly or inherently described as required by the M.P.E.P, the admitted prior art cannot be said to anticipate the present invention as recited in claims 1, 19 or 23. Hence, withdrawal of the rejection is respectfully requested.

Claim 3 depends from independent claim 1; claim 22 depends from independent claim 19; and claims 24-26 depend from independent claim 23 and are patentable over the cited prior art for at least the same reasons as are independent claims 1, 19 and 23.

CLAIM REJECTIONS – 35 U.S.C. §103

Rejection of Claims 9-14

The Examiner rejected dependent claims 9-14 under 35 U.S.C. §103(a) as being unpatentable over the applicant's admitted prior art (paragraphs [0002] – [0007] of the specification).

The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. *MPEP*§2142. To establish a prima facie case of obviousness, three criteria must be met. First, there must be some suggestion or motivation to modify the references or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art must teach all the claim limitations. *MPEP*§2142. In light of the following arguments, the combined references do not teach or suggest all of the claim limitations of the present invention.

Applicant respectfully points to the final prong of the test which states that the prior art must teach all of the claim limitations. At the very least, the combined references do not teach or suggest all of the limitations of claims 9-14.

In accordance with the M.P.E.P. §2143.03, to establish a *prima facie* case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re: Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re: Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494 196 (CCPA 1970). Since, each and every element of the present invention is not taught by the prior art, paragraphs 2-7 of the specification can not teach or suggest the present invention as recited in claims 9-14. Hence, withdrawal of the rejection is respectfully requested.

Rejection of Claims 4-8, 15-18, 20 and 21

Examiner rejected dependent claims 4-8, 16-18, 20 and 21 and independent claim 15 under 35 U.S.C. §103(a) as being unpatentable over the Applicant’s admitted prior art in view of Cheskis, *et al.* Without conceding the propriety of the rejection, claim 15 has been amended. Support for this amendment may be found at least in paragraph 37 of the specification.

The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. *MPEP*§2142. To establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation to modify the references or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art must teach all the claim limitations. *MPEP*§2142. In light of the following

arguments, the combined references do not teach or suggest all of the claim limitations of the present invention.

Applicant's respectfully point to the final prong of the test which states that the prior art must teach all of the claim limitations. At the very least, the combined references do not teach or suggest all of the limitations of claims 4-8, 15-18, 20 and 21, as stated below.

The admitted prior art, paragraphs 2-7 of the specification, discloses die casting chill blocks that are utilized in molds but does not disclose the rapid solidifications spray casting process. U.S. Patent No. 5,343,926 to Cheskis, *et al.*, discloses metal, spray cast onto a moving substrate using at least two sprays, the first of which has a solid fraction greater than 20% at the time the spray contacts the substrate but less than the solid fraction of the second spray.

In contrast, the presently claimed invention discloses chill blocks made from copper bonded to tool steel and, "a method of manufacturing a chill block, comprising: using a rapid solidification process to spray a first material that forms a first layer of a chill block; using said rapid solidification process to spray a second material onto a first surface of the first layer, said second material comprising copper wherein the first layer has a hardness ranging from about 30 to about 70 Rc.," as recited in claim 15.

In accordance with the M.P.E.P. §2143.03, to establish a *prima facie* case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re: Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re: Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494 196 (CCPA 1970). Since, each and every element of the present invention is not taught by the prior art, paragraphs 2-7 of the specification, alone or in combination with Cheskis, *et al.*, can not teach or suggest the present invention as recited in

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Patent

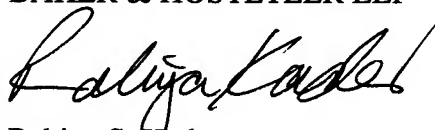
claims 4-8, 15-18, 20 and 21. Hence, withdrawal of the rejection is respectfully requested.

CONCLUSION

In view of the foregoing remarks, Applicants respectfully submit that this application is in condition for allowance. Should the Examiner believe that anything further is necessary to place the application in even better condition for allowance, the Examiner is invited to contact the undersigned attorney at 202-861-1746 in an effort to resolve any matter still outstanding before issuing another action.

In the event this paper is not timely filed, Applicants petition for an appropriate extension of time. Please charge any fee deficiencies or credit any overpayments to Deposit Account No. 50-2036 with reference to our Docket No. 87324.1800.

Respectfully submitted,
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Amendments to the Drawings:

Drawings were objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 94, 98 and 102.

Drawings were objected to because 78' should be changed to 78 in FIG. 1.

In FIG. 3, all instances of "COOPER" should be changed to "COPPER."

Attachment: Replacement Sheet

Annotated Sheet Showing Changes

FIG. 1

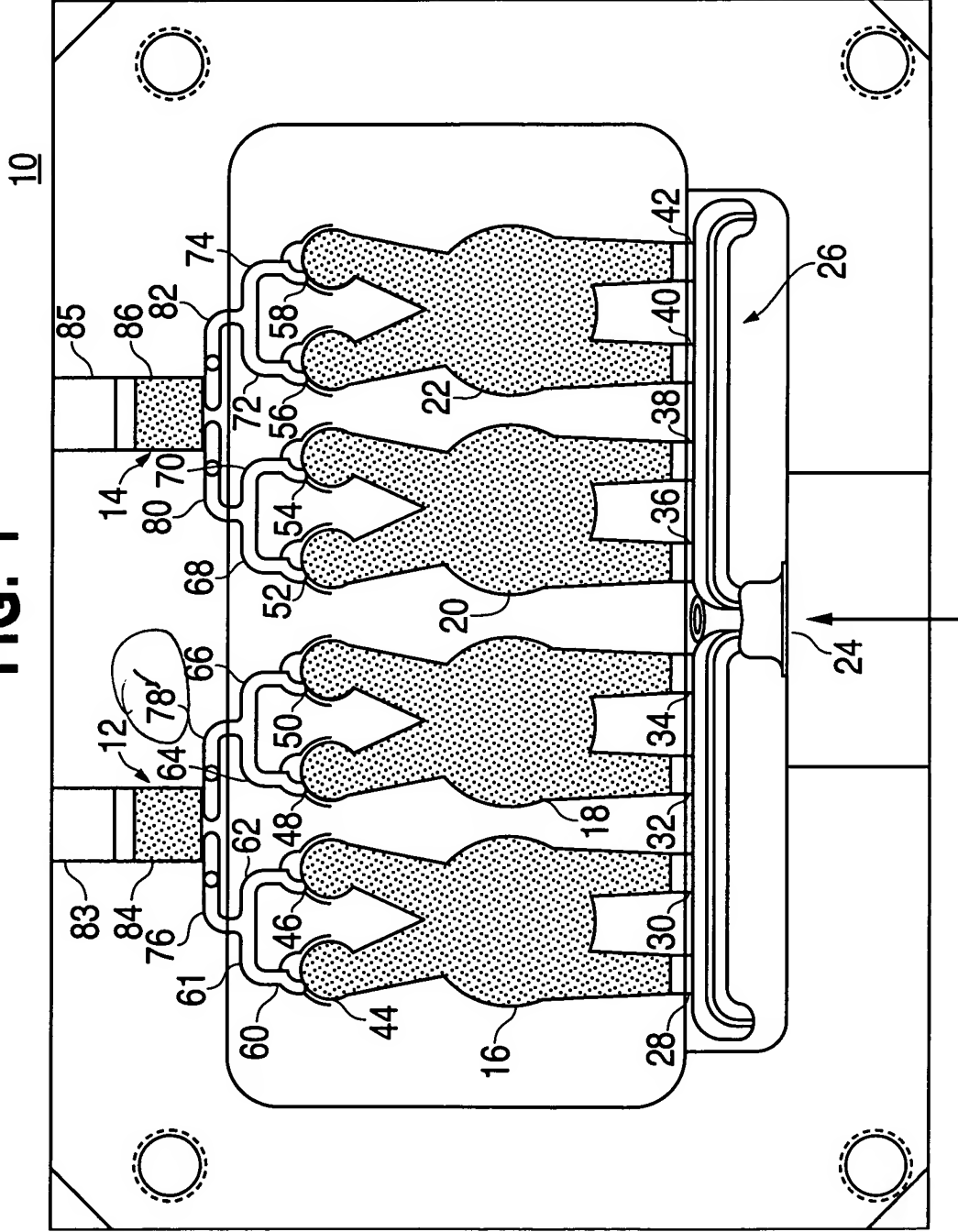


FIG. 3

